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Individual 2D Project - Elemental

Overview

The original proposal for Elemental described an ambitious 2D action-adventure game inspired by The Legend of Zelda and Dragon Quest, where the player travels through four elemental regions (Fire, Water, Earth, Air) to reclaim powers and ultimately defeat a final boss

The final version of Elemental remains faithful to that inspiration but was scaled down into a more manageable, single-scene game while preserving the core gameplay loop of exploration, item collection, and progression. The completed version demonstrates the foundational mechanics necessary for a full game, including multi-room traversal, enemy encounters, item pickups, and restart conditions.

Key Changes and Additions

Core Gameplay Loop:

Original:

- Four elemental zones, each with unique monsters and abilities.

- Sword combat and elemental powers gained after each boss.

Final:

- Simplified into three connected rooms within one scene.

- Core loop: move → collect keys → unlock doors → avoid enemies → progress.

- Retains classic top-down movement and room-based transitions.

- Introduced key inventory and door requirements (e.g., requiring 2 keys to unlock).

- Added death/restart system: Elai (the player) restarts the scene after three hits.

Camera and Room System:

Original:

- Mentioned small rooms "that shift with player movement."

Final:

- Implemented via Cinemachine Confiner 2D and a RoomManager system controlling transitions between three distinct rooms.

- Each room has its own PolygonCollider2D bounds and player spawn point, ensuring smooth transitions and camera confinement.

Added Features:

- Seamless door-to-room transitions.

- Adjustable camera "warp" mode to prevent visible sliding between rooms.

Enemies and AI:

Original:

- Pattern-based CPU monsters for each elemental zone.

Final:

- Implemented EnemyChaseTopDown.cs, a lightweight chase AI that detects Elai within a radius and moves toward him.
- Two elemental enemy types added: Slime_Fire and Slime_Water, each with independent movement speeds and chase ranges.
- Introduced DamageOnTouch and Health systems for player–enemy interactions.
- Implemented invulnerability frames (i-frames) and flashing visual feedback after damage.

Collectibles and Progression

Original:

- Elemental powers earned after defeating bosses.

Final:

- Introduced key pickups (KeyPickup.cs) as the primary collectible mechanic.
- Expanded flexibility by allowing certain doors to require variable key counts (e.g., 2 keys).
- Added optional feature where collecting all keys in the final room automatically restarts the game, simulating a "game complete" state.